REMARKS

Independent claim 1 has been amended to include the limitations of claims 2 and 4. Independent claim 10 has been amended to include the limitations of claim 11. The dependent claims have been amended to correct dependencies and make them consistent with amended claims 1 and 10. Finally claim 19 has been canceled because it is identical to amended claim 10. **Since the above-presented amendments merely combine independent and dependent claims**, and therefore do not raise any **new issues** or introduce **new matter**, entry of the amendments is respectfully requested.

The rejection of claims 1-19 under 35 USC §102(b) in view of U.S. Patent Publication No. 2003/0034959 (Davis) is respectfully traversed on the grounds that the Davis publication fails to disclose or suggest an optical mouse having **an LED, control element, optical element, and sensor** all integrated into a module made up of a single "body" with at least one contact tine extending therefrom, the LED, control element, optical element, and sensor being "*received*" or "*mounted*" in a predetermined space "*defined in the body*," as claimed. Whereas the claimed invention permits the LED, control element, optical element, and sensor to be installed on a circuit board in a mouse handling in a single step of plugging the tine(s) extending from the body into the circuit board, Davis requires separate installation of the lens assembly 38, sensor chip 16/84, and LED 34, which are all independently positioned on the circuit board, the LED 34 being spaced from the body 16 and not even remotely mounted therein, as claimed.

In the "Response to Arguments" section of the Official Action, item 4 on page 4, the Examiner states that:

> *Specifically, Davis teaches in figure 2 a sensor chip body 16 having pins securely provided inside the space and extending from the **body of the sensor chip 16** (see figure 2 at 16). Within, this sensor chip 16, Davis teaches how his optical mouse comprises an LED 34 and a sensor in the form of a photodetector array 84 integrated into a module made up of a single **"body" 16** with at least one contact tine extending therefrom (see figure 2), the LED 34 and sensor 84*

being "received" or "mounted" in a predetermined space "defined in the body 84" (see figures 2 & 4).

This justification for the rejection contains at least two errors:

- First, the explanation of the rejection does not address the inclusion of the optical element in the body. The Examiner will note that original claim 19, as well as several original dependent claims, specifically recited the combination of the LED, sensor, optical element, and control element within the body. The corresponding optical element of Davis is lens assembly 38, which is clearly depicted in **Fig. 3** of the Davis publication as being situated below the body of chip 16.
- Second, LED 34 cannot reasonably be considered to be received or mounted in a space within body 16 from which tines extend. As is clear from **Fig. 3** of the Davis publication, chip 16 in which sensor 84 is located, is spaced from the LED 34, and in fact is separated therefrom by two reflectors 38D.

Thus, the Davis patent clearly lacks at least two elements of the claimed invention, as originally recited in claim 19 and several dependent claims, and now recited in each of the claims, and therefore cannot possibly anticipate the claimed invention.

According to the claimed invention, the LED and sensor, as well as an optical element and control unit are all received or mounted "inside the space defined inside the single body," with the at least one contact tine extending from the body. This arrangement permits all of the principle components of the sensing module, including the LED, sensor, control unit, and optical element, to plugged *as a unit* into a circuit board. This result in substantial savings in assembly time and inventory costs, since Davis requires separate handling and installation of the sensor chip 16, the optical element 38, and the LED 34. Therefore, not only does the Davis patent fail to anticipate the claimed invention, it could not possibly have suggested such integration, by the claimed invention, of all of the optical and control elements required to manufacture an optical mouse. Furthermore, the claimed integration enables substantial miniaturization relative to the separately positioned sensor chip body 16, LED 34, and optical element 38 of Davis, and greatly reduces the possibility of mis-alignment of the various elements.

Fig. 3 of the Davis publication clearly shows that the LED 34 and sensor 16 are **separate** units mounted on a circuit board, and not received within a space defined in the sensor chip body 16. Even if the sensor 16 could be said to be received or mounted in a space "defined in a body" from which a contact tine extends, as claimed, the sensor 16 and LED 34 cannot reasonably be interpreted as being received in the same space within the same body to form a sensor module corresponding to that of the claimed invention. Instead, the sensor 16 and LED 34 of Davis (as well as the optical element 38) must be inventoried separately, and assembled separately to the circuit board 36 for mounting in the mouse housing. **Only the control unit and sensor of Davis are integrated into chip 16. The LED and optical element are not**. The mouse housing of Davis, in which the LED and sensor chip 16 are both received, cannot reasonably be interpreted as corresponding to the claimed body since the mouse housing does not include a tine extending therefrom, as claimed. As a result, the Davis publication neither discloses nor suggests the integration principle of the claimed invention.

Because the Davis publication fails to disclose or suggest the claimed "body" having a contact tine extending therefrom and a space within the body, the LED, sensor, control unit, and optical element all being received in the space within the body, it is respectfully submitted that the rejection of claims 1-19 under 35 USC §102(b) is improper and withdrawal of the rejection is respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

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